**Examining the Middle Class in the United States Using the Lens of the Supplemental Poverty Measure**

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## I.       Introduction

While there is no generally accepted definition of the "middle class" in the United States, most discussions in the United States use pre-tax cash income to define the middle class. Traditionally, this same measure of pre-tax cash income has been used to define poverty.  This paper explores defining the middle class using an alternative measure.

In 2010 an interagency technical working group asked the Census Bureau to produce poverty estimates using an alternative measure, the Supplemental Poverty Measure (SPM).  This alternative poverty measure uses thresholds that are adjusted for geographic differences in housing costs and a resource measure that takes into account noncash benefits, taxes, work expenses and out-of-pocket medical expenses. The new poverty measure also uses an expanded unit of analysis that includes cohabiting partners and unrelated children in the resource unit. This paper applies these SPM concepts to the challenge of defining and describing the middle class in the United States.

## II.      Approaches to Defining the Middle Class

While much has been written on the middle class, there is no widely accepted approach to defining the middle class.  Some analyses of the middle class equate being in the middle class with having income in the middle of the income distribution.  Other analyses include in the middle class anyone who self-identifies as middle class.  A third approach is to count as middle class anyone who has achieved certain aspirations – owning their own home, having savings for retirement and/or the ability to send their children to college. As may be expected, these disparate approaches do not identify the same people as being in the middle class.

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Of the analyses that equate being in the middle class with having an income in the middle of the income distribution, many use median household income to "define" the middle class. This metric is a useful summary measure that can be tracked over time and across countries. Each year the Census Bureau publishes a number of tables providing estimates of median household income and median family income.

While the Census Bureau tables generally use pretax cash income to define these medians, other analyses use alternative income concepts. For example, an April 2014 analysis by a New York Times website covering policy and politics, used data from the Luxembourg Income Study Database to compare median after-tax cash income that included direct government benefits such as tax credits. The analysis found that while the median income in the United States used to be much higher than the median in Western European countries, the gap in several countries (including Britain, the Netherlands and Sweden) is much smaller than it was a decade ago (Leonhardt).

Another example is a June 2011 NBER Working Paper which used a variety of income measures to calculate median income. The growth in median income between 1979 and 2007 ranges from 3.2 percent when the analysis is based on the tax unit and pre-tax, pre-transfer income to 36.7 percent when the analysis is based on a size-adjusted household and post-tax, post-transfer (including the value of health insurance) income (Burkhauser).

While median income is a good metric to describe trends over time and across countries, it does not permit an analysis of the composition of the middle class. To conduct this type of analysis, we need a definition that identifies who is in the middle class at any one point in time. There are two general approaches to these income-based definitions: a fixed-size middle class and a middle class defined by income thresholds.[2] The fixed-size income middle class defines the middle class as the middle 60 (or 40 or 50) percent of the income distribution. Using this approach one can discuss changes in the share of income received by the middle class but by definition, the "size" of the middle class cannot vary. The alternative approach sets income limits of the middle class and counts how many individuals have incomes between these limits.[3] Since

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[2] See Atkinson and Brandolini for a review of various definitions of the middle class, including definitions based purely on the dimension of personal income as well as definitions that consider property, wealth and occupational structures.

[3] According to Atkinson and Brandolini, "the economics literature is said to be 'converging' on the definition of these income limits relatively: as 75 percent and 125 percent of the median. They go on to discuss that while the lower limit may be justified by its relationship to the poverty level (defining middle class as comfortably clear of being at-risk-of-poverty) the upper limit has little evident rational apart from symmetry. In practice, setting the upper limit at 125 percent of the median would result in a large "upper income" group, almost 20 percent of the population in the United Kingdom and the United States and well above it in Mexico.

most analyses of the middle class in the United States have used the income limit approach, this paper will also use this approach.

There is no official definition of the middle class in the United States. In recent years, analysts have used a variety of income concepts to define middle class in the United States. For example:

- A 2008 Pew Research Center study defined the middle class as those with incomes between 75 percent and 150 percent of overall adjusted median income with income adjusted for household size using the square root of household size (Taylor)
- A January 2010 U.S. Department of Commerce Economics and Statistics Administration report constructed hypothetical budgets based on income at the 25th percentile, median and 75th percentile of the income distribution.
- Robert Reich, a professor of Public Policy at the University of California-Berkeley and former Secretary of Labor, has suggested the middle class be defined as households making 50 percent higher and lower than the median (Williams)
- Aaron Pacitti, an assistant professor of economics at Siena College suggested that middle income should be defined as the middle of this middle, between 75 percent and 125 percent of the median. (Williams)
- A 2012 Brookings Institute study defined middle class as having an income greater than 300 percent of the poverty line. (Sawhill).
- A 2012 Pew Research Center study defined the middle tier as all adults whose annual household income is two-thirds to double the national median with incomes adjusted for household size and then scaled to reflect a three person household. (Pew Research Center)
- A 2013 policy memo from the Hamilton Project defined lower middle class as families with incomes between 100 and 250 percent of the federal poverty level. (Kearney)
- In a 2012 working paper, Short and Smeeding define "people with moderate income" as those with resource to threshold ratios between 100 and 200 percent of the Supplemental Poverty Measure (Short, 2012). This study used a different measure of resources than has been used previously and is the resource measure used in this paper.

### III.    A Supplemental Poverty Measure Definition of Middle Class

While most studies described above used pre-tax cash income to examine the middle class this study uses a different measure of resources. The SPM resource measure is constructed to be what families or individuals have to meet a basic set of needs including food, clothing, shelter and utilities after paying for necessary expenses such as taxes, medical expenses, or expenses related to going to work, such as commuting or child care. We proceed by examining differences between the US official poverty measure that uses pre-tax cash income and the SPM.

In both cases we examine ratios of income/resources to the relevant poverty threshold. These two measures differ in important ways.

**Thresholds**

- The "Orshansky" thresholds used for the official poverty measure in the United States are used for the pre-tax cash measure. These thresholds were based on a multiplier of basic food needs. They were developed in the 1960s and are updated each year to reflect changes in the consumer price index.

- The SPM thresholds for 2012 are based on out-of-pocket spending on food, clothing, shelter and utilities (FCSU). Thresholds use five years of quarterly data from the Consumer Expenditure Survey (CE); the thresholds are produced by staff at the Burea of Labor Statistics(BLS). Three housing status groups were determined and their expenditures on shelter and utilities produced within the 30–36th percentiles of FCSU expenditures. The three groups include owners with mortgages, owners without mortgages, and renters. American Community Survey (ACS) data on rents paid are used to adjust the FCSU thresholds for differences in spending on housing across geographic areas.

**Unit of Analysis**

- The pre-tax cash measure uses the Census-defined family that includes all individuals residing together who are related by birth, marriage, or adoption and treats all unrelated individuals over age 15 independently.

- For the SPM, the "family unit" includes all related individuals who live at the same address, as well as any co-resident unrelated children who are cared for by the family (such as foster children), and any cohabitors and their children. Independent, unrelated individuals living alone are one-person SPM units. This definition corresponds broadly with the unit of data collection (the consumer unit) that is employed for the CE data used to calculate poverty thresholds. These units are referred to as SPM Resource Units. Selection of the unit of analysis implies that members of that unit share income or resources with one another.

**Equivalence Scale**

- The official thresholds are adjusted based on family size, number of children and adults, as well as whether or not the householder is aged 65 or over. The implicit equivalence scales in the official thresholds reflect the food budgets from which they were originally derived.

- SPM thresholds are adjusted for the size and composition of the SPM Resource Unit relative to the two-adult-two-child threshold using a three parameter equivalence scale.

**Resources**
- The pre-tax cash income measure uses pre-tax cash income as the resource measure.

- SPM resources are estimated as the sum of cash income; plus any federal government noncash benefits that families can use to meet their FCSU needs; minus taxes (plus tax credits), work expenses, and out-of-pocket expenditures for medical expenses. The SPM resources used in this study adds the value of noncash benefits and subtracts necessary expenses, such as taxes, child care expenses, and medical out-of-pocket (MOOP) expenses. For the SPM, estimates from additional questions about child care and MOOP expenses are available and subtracted from income.

Using the SPM allows an examination of some important elements that affect the economic well-being of people and families. Some of the important dimensions that are a part of the SPM include cost of living differences by geographic area, payments made for health care and health insurance, housing tenure and mortgage finances, child care supports, and government tax and transfer policies. This paper attempts to show the importance of these elements in assessing the relative standing of families and individuals across income/resource distributions and specifically for those in the middle of that distribution who may be referred to as the middle class.

The technical appendix to the most recent Census Bureau report on the Research Supplemental Poverty Measure provides more details regarding the technical construction of this measure. (Short, 2013).

## IV.    Data and Methods

The estimates presented in this study use the 2013 Current Population Survey Annual Social and Economic Supplement (CPS ASEC)[4] income information that refers to calendar year 2012. These are the same data used for the preparation of official poverty statistics and reported in DeNavas-Walt et al. (2013).

In order the identify the middle class, this paper will borrow the definition used by the 2008 Pew Research Center analysis --- individuals with resources between 75 percent and 150 percent of the median.  This paper will compare the population identified as "middle class"

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[4] The estimates in this paper are from the 2013 Annual Social and Economic Supplement (ASEC) to the Current Population Survey (CPS). The estimates in this paper (which may be shown in text, figures, and tables) are based on responses from a sample of the population and may differ from actual values because of sampling variability or other factors. As a result, apparent differences between the estimates for two or more groups may not be statistically significant. All comparative statements have undergone statistical testing and are significant at the 90 percent confidence level unless otherwise noted. Standard errors were calculated using replicate weights. Further information about the source and accuracy of the estimates is available at <www.census.gov/hhes/www/p60_245sa.pdf>.

applying the Pew Research Center definition to pre-tax cash income and the official poverty thresholds to those identified as middle class using the SPM threshold and resource concepts.[5]

Many studies use equivalized income to examine distributions. Equivalized income takes account of variation in household sizes. This is typically done by dividing income amounts by the square root of the number of individuals in the household or some other equivalence scale. Another approach uses scales inherent in poverty thresholds to control for unit size. Using resource to poverty ratios to define the middle class has the advantage that it is an accepted methodology to adjust income for differences in family/household size. The official poverty thresholds vary by the size of the family and the age of family members. The SPM thresholds use a three parameter equivalence scale to account for family size. In addition, the SPM thresholds are adjusted to reflect geographic differences in the cost of housing across the United States.

In 2012, the median ratio of SPM resources to SPM thresholds was 2.12. Using 75 percent and 150 percent of the median to establish cutoffs, anyone with an SPM resource to threshold ratio between 1.6 and 3.2 would be categorized as "middle class." In order to compare the group identified as middle class using the SPM concepts to the group identified as middle class using pre-tax cash income, this analysis also constructs a definition of middle class based on the ratios derived from pre-tax cash income and the official poverty thresholds. The cutoff points for this alternative definition of the middle class are 75 percent and 150 percent of the median pre-tax cash income to official poverty threshold ratio (2.9). In this case anyone with an income to poverty ratio between 2.2 and 4.4 would be categorized as middle class.

Table 1 shows the official and SPM thresholds and the dollar amounts of the national average income cutoffs for 2012 by tenure status, e.g., homeowner with a mortgage, homeowner without a mortgage, renter.

### V.　　Comparison of the Population Classified as Middle Class using two measures

Table 2 provides estimates of the number and percent of the population classified as middle class using our definition of middle class and the two alternative income/resource measure. Using the SPM ratios, 111 million people were classified as middle class in 2012. This represents 35.8 percent of the total population. Using the alternative measure based on the official poverty thresholds and pre-tax cash income, 96 million (30.8 percent) of the population are classified as middle class. The SPM approach increases the ranks of the middle class by 15.5 million people.

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[5] Appendix Table A includes several sets of estimates using alternative definitions of the middle class. For all but one of these definitions, the number and percent of the population identified as middle class using the SPM concepts is larger than the number and percent identified using pre-tax cash income. The exception is the definition that uses over 300 percent of the resource to threshold ratio for which the relationship is reversed.

Table 2 provides estimates of the number and percent of people in the middle class for a variety of geographic and demographic groups for each measure. For all groups included in Table 2 the SPM measure identifies a larger number and a larger percentage of the population as middle class.

Some of the higher percentage point increases in the "middle class rate" were for people in new SPM units, people classified as "other race," children, Asians and those with only public health insurance.[6] Some of the groups with lower percentage point increases include the noncitizens, the elderly, people in households with a male reference person, Hispanics, non-citizens, owners without a mortgage, and the foreign born.[7]

While Table 2 compares the percent of the population in the middle class or the middle class rate, Table 3 compares shares: the distribution of people in the total population across selected groups with the distribution of people classified as middle class using the two measures. Since the number and percent of people in the middle class were higher for all groups using the SPM, comparing shares of the population permits us to look at relative movements by group. For example, both the number of males and the number of females in the middle class were higher using the SPM approach but, as can be seen in Table 3, the share of women in the middle class increased from 49.9 percent to 50.4 percent using the SPM while the share of men is smaller.

Other groups whose share of the middle class increased when switching to the SPM definition included:   children, people in new SPM resource units, Asians, other races, non-Hispanics, native born citizens, those living outside metropolitan statistical areas, owners with a mortgage, renters, the uninsured, people with public health insurance,  and  people who worked less than full-time year-round.

On the other hand, shares fell for nonelderly adults, the elderly, people in married couple families, people in units with a male householder, whites, Hispanics, noncitizens, owners without a mortgage, people with private health insurance, people who worked full-time year-round, people with no disability.

Shares were not statistically different across the two measures for people in units with female householders, Blacks, naturalized citizens, people living inside metropolitan statistical areas, people who did not work at least a week and people with a disability.

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[6] The percent change for those classified as "other race" was not different from the percent changes for Asians, those with public insurance and owners with mortgages.  The percent change for children under age 18 was not different from the percent changes for Asians and those with public insurance.  The percent change for Asians was not different from the percent changes for those with public insurance, owners with mortgages, those living outside MSAs, those working less than full time year round, people living in the Northeast and Hispanics.

[7] The percent change for noncitizens was not different from the percent changes for the elderly, people in units with a male householder, owners with no mortgage.  The differences in the percent changes for the elderly, those in units with male householders, owners with no mortgage, the foreign born and Hispanics were not statistically significant.

## VI.   Changes in Middle Class Classifications

If we use the SPM rather than pre-tax cash income to classify middle class status, the number of people in the middle class increases from 96 million to 111 million.  While this net change of approximately 15.5 million is relatively modest, almost 60 million people change status when the measure is changed.

- 74 million people are classified as middle class by both definitions
- 37 million people who are not classified as middle class using the pre-tax cash resource definition  are  middle class using the SPM definition
    - 18 million of these are below middle class using the pre-tax cash definition
    - 19 million are  above middle class with the pre-tax cash measure
- 22 million people who are classified as middle class using the pre-tax cash definition are not classified as middle class using the SPM definition
    - 13 million of these are below middle class using the SPM.
    - 9 million are above middle class using the SPM.
- 178 million are not classified as middle class in either measure.

Table Four provides summary statistics for each of these six groups.

**Not pre-tax cash middle class and in SPM Middle Class**:  The individuals who are below the pre-tax cash  middle class but in the middle class when we uses the SPM approach are distributed across all the demographic and geographic groups shown in the table but the percentage included in this category is higher for some groups.  Among the groups with the highest percentages in this group are:  people in new SPM resource units (18.1 percent), people living outside metropolitan statistical areas (12.5 percent), people with public health insurance (10 percent), and owners without a mortgage (9.1 percent).

On the other hand, the groups most likely to be changed from "above the middle" to the SPM middle were Asians (11.7 percent), naturalized citizens (10.0 percent), owners with a mortgage (10.0 percent), people with private insurance (8.3 percent), full-time year-round workers (8.5 percent), and people living in the Northeast and West (8.6 percent and 8.0 percent).[8]

**In pre-tax cash middle class and not SPM Middle Class:**  The groups who were most likely to be in pre-tax cash the middle class but below the SPM middle class were:  naturalized

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[8] The percent for naturalized citizens was not different from the percent for owners with a mortgage.  The differences in the percentages  for those living in the Northeast, those working full time, year-round, those with private insurance and those living in the West were not statistically significant. The percent for those living in the West was not statistically different from the percent of those living in married couple units.

citizens (7.1 percent), owners with a mortgage (6.7 percent), those working full time year round (6.3 percent) and Asians (6.1 percent).[9]

The groups most likely to be pre-tax cash middle class but above the SPM middle class were people in the new SPM units (7.3 percent) and owners with no mortgage (6.7 percent) and people living outside metropolitan statistical areas (6.4 percent).[10]

### VII. Effect of Each SPM Component on the Middle Class Definition

Examination of the groups that are most likely to change classifications provides some hints as to the relative importance of specific elements of the SPM. For example, the fact that people living in the West and the Northeast are more likely to have their classification lowered (either from above the pre-tax cash middle class into the SPM middle class or from the pre-tax cash middle class to below the SPM middle class) suggests the importance of the adjustments of the thresholds for differences in housing costs. Housing costs are higher in both these regions. Seeing that people living in new SPM resource units are more likely to have their classification upgraded (either from below middle into the SPM middle or from the middle to above the SPM middle) suggests that including the resources of cohabitors into the unit is an important change.

Table 5 displays the results of an exercise designed to more precisely identify the impact of particular elements on the middle class classification scheme. The categorization was recalculated for all people removing one SPM element at a time. For example, the classification program was rerun using SPM thresholds that were not adjusted for differences in housing costs while all other elements of the SPM were present.

We can see from Table 5 that the payment of taxes is the element that most affects the middle class categorizations. If pre-tax income were used in the calculation, 19 million fewer people would be classified as middle class. Consideration of payroll taxes, refundable tax credits and all other taxes (before refundable credits and payroll taxes) all increase the number of people in the middle class. Adjusting the thresholds for geographic differences in housing costs increases the total in the middle class by 1.7 million.[11] Adding the value of noncash benefits to resources also increases the total in the middle class. Two elements subtracted from resources decrease the size of the middle class: work expenses and medical out-of-pocket expenses.

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[9] The differences in the percentages for naturalized citizens, owners with a mortgage, full-time year-round workers and Asians were not statistically significant. The percent for full-time, year-round workers and Asians were not statistically different from the percentages for males and the foreign-born.

[10] The difference in the percent of owners without a mortgage and the percent of people living outside MSAs was not statistically significant.

[11] The difference in the number of people added to the middle class by the consideration of payroll taxes and the number added by the geographic adjustments is not statistically significant.

Table 6 examines the changes in the entries to the middle class and exits from the middle class for the alternative specifications of the middle class metric. From this table we can see the relative importance of each element for each category. Subtracting payroll taxes from resources is an element of the SPM that moves people down the income scale. From this exercise we can see that payroll taxes reduce the number of people entering the SPM middle from below by 3.9 million and increase the number who are moved into the SPM middle from above by 5.6 million. About 3.9 million fewer people are moved from the pre-tax cash middle into above the SPM middle and 3.7 million more people move down from the pre-tax cash middle into below the SPM middle due to payroll taxes.[12]

Medical out-of-pocket expenditures have even larger impacts. On the entry side, 8.8 million fewer people are moved from below the middle to the SPM middle because of MOOP and 6.3 million are moved down from above the SPM middle into the middle by MOOP. On the exit side 7.1 million are moved out of the pre-tax cash middle into below the SPM middle by MOOP subtractions and 6.2 million are prevented from moving above the SPM middle.[13]

Two other subtractions, work expenses and income taxes before credits exhibit patterns not statistically different from payroll taxes and MOOP. Fewer people are moved up to the SPM middle and fewer people are moved up and out of the SPM middle. More people move down into the SPM middle and down below the SPM middle when these subtractions are taken into account.

On the other hand, the geographic adjustments increase the number of people in each of the four categories. This is not surprising given the fact that these adjustments move some people up while moving others down.

Examining refundable tax credits and noncash benefits using these estimates reveals that these two elements push 3.5 million and 2.3 million individuals up from below the SPM middle into the SPM middle but have very small impacts on any of the other categories.

Table 6 also permits comparisons across the different definitions. Of the elements examined here, medical out-of-pocket expenses are the most important for reducing the number of people moved up from below to the SPM middle. Refundable tax credits are most important for increasing the number of people moved up. For those moved down into the SPM middle class, income taxes are the most important, followed by MOOP, payroll taxes and work

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[12] The difference between the number not moved into the SPM middle class from below and the number who do not exit the SPM middle class to above the middle class due to payroll taxes is not statistically significant. The differences between the absolute value of those moved from the SPM middle class to below and those not moved into the SPM middle class from below and those not moved to above the SPM middle class due to payroll taxes are not statistically significant.

[13] The difference between the absolute number of individuals moved down from above the SPM middle into the SPM middle by MOOP and the number who prevented from moving from the SPM middle to above the SPM middle by MOOP is not statistically significant.

expenses.[14] On the exit side, MOOP and income taxes are the most important elements moving people out of the SPM middle class into below middle class but work expenses and payroll taxes are also important.[15] For those exiting to above the middle class, income taxes are the most important followed by MOOP and payroll taxes.

Appendix tables B and C show the impact of each of the SPM elements for each of the age categories and each of the SPM resource unit types.

## VIII. Changes Across Two Measures in A Multivariate Framework

Since there are many differences between the SPM approach and the pre-tax cash income approach, it is useful to examine these outcomes in a multivariate context. Tables 7, 8, 9 and 10 present estimates from four logistic regressions models[16]:

- the probability of being below pre-tax cash middle class and in the middle class using the SPM – Table 7;
- the probability of being above the pre-tax cash middle class and in the
- SPM middle class – Table 8;
- the probability of being in the pre-tax cash middle class and below the SPM middle class – Table 9;
- the probability of being pre-tax cash middle class and above SPM middle class category – Table 10.

The four models contain the same explanatory variables that consist of various demographic characteristics, indicators of thresholds adjustments for housing tenure and residence and region, indicators of receipt of noncash benefits and payment of nondiscretionary expenses. A coefficient greater than one suggests that having a characteristic, like a benefit or a tax, is associated with a higher probability of being in a given group relative to the omitted category. For all these models the omitted categories are: nonelderly adults, residence in the Northeast, owners with a mortgage, married couple resource units, White, living inside the principal city of a metropolitan statistical area, having no health insurance, working full-time full-year. Dummy variables for being Hispanic, having a disability, having MOOP expenses,

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[14] The difference in the number of people moved down into the SPM middle by work expenses and the number moved down into the SPM middle by the geographic adjustments is not statistically significant.

[15] The difference in the number of people moved out of the SPM middle class into below the middle class by income taxes before credits and the number moved out by work expenses is not statistically significant. The difference between the number moved by MOOP and the number moved by all taxes before refundable credits is not statistically significant.

[16] Appendix Table D provides multivariate odds ratio for being classified as in the SPM middle class using these same characteristics.

paying income taxes before credits, paying payroll taxes, receiving refundable tax credits, paying for child care and living in an area with median rent for a two-bedroom apartment higher than the national median are included in the model. Statistical significance represents correlation between the explanatory variable and being in a given group, not necessarily causality.

The results in Table 7 show the characteristics, holding everything else constant, that are associated with being below pre-tax cash middle class but in SPM middle class. Results suggest that living in a new SPM resource unit (generally a unit that includes a cohabiting partner) and receiving refundable tax credits greatly increase one's odds of being in the SPM middle class category. Children, the elderly, owners without a mortgage, renters, people not in married-couple families, people living outside MSAs and people who did not work are more likely to be in this group. Income tax liabilities are also associated with a higher probability of being in this group. This may be that liabilities are below refundable tax credits but are still represented here as paying taxes. Living in a high-cost area, not being White, being Hispanic, not being a citizen, having only private health insurance and paying payroll taxes reduce the odds of moving up.

Table 10 suggests that these same factors are associated with individuals being classified as pre-tax cash middle class to above SPM middle class, particularly living in a new SPM resource unit. Not surprisingly, receiving refundable tax credits increases your odds of moving from below the middle into the middle but does not increase your odds of moving from the middle to above the middle. Living in a high cost area and paying payroll taxes reduce your odds of moving up in either scenario. The groups most likely to move "up and out" of the middle class are those living in the Midwest or South, owners without a mortgage, renters, people living in a female householder unit, people living outside a MSA, people with private health insurance, and people with pubic insurance. Those with lower odds ratios for moving "up and out" are the elderly, those who worked less than full-time year-round, those who did not work, those who received noncash benefits, those who paid payroll taxes and those living in high-cost areas.

Tables 8 and 9 enable us to identify elements that move families "down", either from above the pre-tax cash middle class into the SPM middle class or from the pre-tax cash middle class into below the SPM middle class. Table 8 shows the importance of income taxes in pushing people from above the pre-tax cash middle class into the SPM middle class. Living in high cost areas, having MOOP expenses and paying for child care are important for both kinds of downward movements.

These results confirm the importance of several elements of the SPM approach, particularly the new unit of analysis, the thresholds that differ by tenure status and the geographic adjustments of the thresholds.

- Lower thresholds for those who own without a mortgage and for those who live in areas with rents below the national median are more likely to move up into the SPM middle

class and move up and out of the SPM middle class. Many of these people live in the South and/or outside MSAs.

- Including the income of cohabiting partners in the resource unit also increases the odds of moving up into the SPM middle and up and above the SPM middle.
- Adding refundable tax credits to the resource measure increase the odds of moving up into the SPM middle but do not increase the odds of moving up and above the SPM middle class. This would be expected given the relatively low income eligibility limits for refundable tax credits in the United States.
- Subtracting medical out-of-pocket expense from resources is a significant factor increasing the odds of moving down – either from above into the SPM middle or from the middle to below the SPM middle – but does not result in a statistically significant change in your odds of moving up.
- Paying childcare expenses is statistically significant in the models of those moving down from above the middle class into the SPM middle and from the SPM middle into below middle class.
- Payroll taxes increase your odds of moving down from above the middle into the SPM middle and decrease your odds of moving up from below into the SPM middle and from the middle to above the SPM middle.
- Paying income taxes (before credits) significantly increases your odds of being in any of these groups but has by far the strongest influence on moving down from above the middle class into the SPM middle class.

## IX.    Conclusions

Many examinations of the middle class use a measure of income to identify the group of interest. In the US the usual income measure used is pre-tax cash income, the income concept used in the official poverty measure. This paper used a different measure to examine the population that is defined as middle class in the US. The resource measure in the SPM differs from official income measure in that it adds the value of noncash benefits and subtracts necessary expenses, such as taxes and medical out-of-pocket expenses. Examining income/resource to poverty threshold ratios also brings in other important differences including different equivalence scales and adjustments by housing tenure and geographic variation in housing costs. All of these adjustments contribute to a resource measure that better reflects the actual circumstances that families and individuals face in a more accurate way than does pretax cash income. Comparing these two measures sheds light on how our perception of who is in the middle class may be inadequate using typical measures.

Our analysis showed that there are likely more women, children, cohabiting couples, Asians, other races, non-Hispanics, native born citizens, those living outside metropolitan statistical areas, owners with a mortgage, renters, the uninsured, people with public health

insurance, and people who worked less than full-time year-round in the middle class than are identified using a traditional income measure.

On the other hand, traditional income measures may include more nonelderly adults, elderly, people in married couple families, people in units with a male householder, whites, Hispanics, noncitizens, owners without a mortgage, people with private health insurance, people who worked full-time year-round, and people with no disability as being in the middle class compared with a resource measure that accounts for available resources after necessary expenses as measured by the SPM.

More in depth examination suggests that important elements that should be included in identifying the middle class would be cost of living differences, health care systems, housing tenure and mortgage finances, child care supports, and government tax and transfer policies. This paper demonstrated the importance of these elements in assessing the relative standing of families and individuals across income/resource distributions.

Further research on this topic should examine the sensitivity of these results to the specific definition of the middle class chosen for the analysis. In particular, it would be interesting to examine these results using a fixed-size approach. How do the shares of income going to the middle 50/60 percent of the population change when using the SPM concepts rather than pre-tax cash resources?

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## Table 1.  Thresholds Defining Middle Class Status: Two Adult, Two Child Units - 2012

| | Poverty Threshold | Median Resource to Threshold Ratio | Lower Bound (75 Percent of Median) | | Upper Bound (150 percent of median) | |
|---|---|---|---|---|---|---|
| | | | Ratio | Dollar Amount | Ratio | Dollar Amount |
| Pre-tax Cash/Official Threshold | 23,283 | 2.9 | 2.2 | 51,223 | 4.4 | 102,445 |
| | | | | | | |
| SPM | | | | | | |
| Owners with Mortgage | 25,784 | 2.1 | 1.6 | 41,254 | 3.2 | 82,509 |
| Owners without Mortgage | 21,400 | 2.1 | 1.6 | 34,240 | 3.2 | 68,480 |
| Renters | 25,105 | 2.1 | 1.6 | 40,168 | 3.2 | 80,336 |

Note:  Lower bound is 75 percent of the median resource to threshold ratio.  Upper bound is 150 percent of the median resource to threshold ratio.

Source:  2013 Current Population Survey Annual Social and Economic Supplement.

# Table 2.  Number and Percentage of People in the Middle Class by Different Measures:  2012

| Characteristics | Number (in thousands) | SPM Middle Class | | | | Pre-Tax Cash Income Middle Class | | | | Difference | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Number | SE | Percent | SE | Number | SE | Percent | SE | Number | Percent |
| **All People** | 311,116 | 111,233 | 611 | 35.8 | 0.2 | 95,765 | 672 | 30.8 | 0.2 * | 15,468 * | 5.0 |
| **Sex** | | | | | | | | | | | |
| Male | 152,335 | 55,191 | 330 | 36.2 | 0.2 | 48,010 | 369 | 31.5 | 0.2 * | 7,181 * | 4.7 |
| Female | 158,781 | 56,043 | 353 | 35.3 | 0.2 | 47,755 | 375 | 30.1 | 0.2 * | 8,288 * | 5.2 |
| **Age** | | | | | | | | | | | |
| Under age 18 | 74,187 | 27,238 | 236 | 36.7 | 0.3 | 21,625 | 251 | 29.1 | 0.3 * | 5,613 * | 7.6 |
| Aged 18 to 64 | 193,642 | 68,887 | 397 | 35.6 | 0.2 | 59,919 | 451 | 30.9 | 0.2 * | 8,968 * | 4.6 |
| Aged 65 years and older | 43,287 | 15,108 | 206 | 34.9 | 0.5 | 14,221 | 203 | 32.9 | 0.5 * | 888 * | 2.1 |
| **Type of Unit** | | | | | | | | | | | |
| Married Couple | 186,869 | 70,740 | 601 | 37.9 | 0.3 | 61,919 | 614 | 33.1 | 0.3 * | 8,821 * | 4.7 |
| Female householder | 62,778 | 18,760 | 293 | 29.9 | 0.4 | 15,967 | 288 | 25.4 | 0.4 * | 2,793 * | 4.5 |
| Male householder | 33,554 | 11,348 | 202 | 33.8 | 0.5 | 10,584 | 221 | 31.5 | 0.6 * | 764 * | 2.3 |
| New SPM | 27,914 | 10,385 | 257 | 37.2 | 0.7 | 7,294 | 195 | 26.1 | 0.6 * | 3,091 * | 11.1 |
| **Race and Hispanic Origin** | | | | | | | | | | | |
| White | 242,469 | 87,527 | 539 | 36.1 | 0.2 | 76,077 | 572 | 31.4 | 0.2 * | 11,451 * | 4.7 |
| Black | 40,208 | 13,446 | 254 | 33.4 | 0.6 | 11,577 | 237 | 28.8 | 0.6 * | 1,870 * | 4.7 |
| Asian | 16,433 | 5,917 | 166 | 36.0 | 1.0 | 4,754 | 143 | 28.9 | 0.9 * | 1,164 * | 7.1 |
| Other | 12,006 | 4,342 | 130 | 36.2 | 1.1 | 3,358 | 118 | 28.0 | 1.0 * | 984 * | 8.2 |
| Nonhispanic | 257,887 | 95,371 | 575 | 37.0 | 0.2 | 81,411 | 610 | 31.6 | 0.2 * | 13,960 * | 5.4 |
| Hispanic | 53,230 | 15,862 | 254 | 29.8 | 0.5 | 14,354 | 255 | 27.0 | 0.5 * | 1,508 * | 2.8 |
| **Nativity** | | | | | | | | | | | |
| Native Born | 271,010 | 99,095 | 573 | 36.6 | 0.2 | 84,716 | 645 | 31.3 | 0.2 * | 14,378 * | 5.3 |
| Naturalized Citizen | 18,200 | 6,305 | 141 | 34.6 | 0.7 | 5,519 | 138 | 30.3 | 0.7 * | 787 * | 4.3 |
| Foreign Born | 40,107 | 12,139 | 215 | 30.3 | 0.5 | 11,048 | 201 | 27.5 | 0.5 * | 1,090 * | 2.7 |
| Not a Citizen | 21,906 | 5,833 | 138 | 26.6 | 0.6 | 5,530 | 139 | 25.2 | 0.6 * | 304 * | 1.4 |
| **Residence** | | | | | | | | | | | |
| Inside principal cities | 101,363 | 31,911 | 546 | 31.5 | 0.4 | 27,611 | 537 | 27.2 | 0.4 * | 4,300 * | 4.2 |
| Outside principal cities | 161,965 | 60,490 | 691 | 37.3 | 0.3 | 52,332 | 664 | 32.3 | 0.3 * | 8,158 * | 5.0 |
| Outside metropolitan statistical areas | 47,788 | 18,832 | 664 | 39.4 | 0.5 | 15,822 | 555 | 33.1 | 0.6 * | 3,010 * | 6.3 |
| **Tenure** | | | | | | | | | | | |
| Owner/mortgage | 137,771 | 55,672 | 554 | 40.4 | 0.3 | 46,563 | 570 | 33.8 | 0.3 * | 9,109 * | 6.6 |
| Owner/no mortgage/rent free | 72,546 | 25,417 | 365 | 35.0 | 0.4 | 23,728 | 339 | 32.7 | 0.4 * | 1,688 * | 2.3 |
| Renter | 100,799 | 30,145 | 416 | 29.9 | 0.3 | 25,473 | 373 | 25.3 | 0.3 * | 4,672 * | 4.6 |
| **Health Insurance Coverage** | | | | | | | | | | | |
| Not insured | 47,951 | 14,709 | 240 | 30.7 | 0.5 | 12,205 | 221 | 25.5 | 0.4 * | 2,504 * | 5.2 |
| With private insurance | 198,812 | 79,693 | 596 | 40.1 | 0.3 | 71,278 | 632 | 35.9 | 0.3 * | 8,415 * | 4.2 |
| With public, no private insurance | 64,354 | 16,832 | 261 | 26.2 | 0.4 | 12,282 | 244 | 19.1 | 0.4 * | 4,550 * | 7.1 |
| **Work experience** | | | | | | | | | | | |
| Worked full-time, year-round | 98,715 | 38,891 | 289 | 39.4 | 0.3 | 34,616 | 321 | 35.1 | 0.3 * | 4,275 * | 4.3 |
| Less than full-time, year-round | 47,099 | 16,916 | 204 | 35.9 | 0.4 | 14,091 | 188 | 29.9 | 0.4 * | 2,825 * | 6.0 |
| Did not work at least 1 week | 47,828 | 13,080 | 185 | 27.3 | 0.3 | 11,212 | 178 | 23.4 | 0.4 * | 1,869 * | 3.9 |
| **Disabililty** | | | | | | | | | | | |
| With a disability | 14,996 | 4,486 | 101 | 29.9 | 0.6 | 3,771 | 88 | 25.1 | 0.5 * | 715 * | 4.8 |
| With no disability | 177,727 | 63,980 | 384 | 36.0 | 0.2 | 55,754 | 423 | 31.4 | 0.2 * | 8,226 * | 4.6 |
| **Region** | | | | | | | | | | | |
| Northeast | 55,135 | 19,124 | 276 | 34.7 | 0.5 | 16,138 | 263 | 29.3 | 0.5 * | 2,986 * | 5.4 |
| Midwest | 66,422 | 25,144 | 276 | 37.9 | 0.4 | 21,955 | 306 | 33.1 | 0.5 * | 3,189 * | 4.8 |
| South | 116,130 | 41,906 | 455 | 36.1 | 0.4 | 36,432 | 428 | 31.4 | 0.4 * | 5,474 * | 4.7 |
| West | 73,429 | 25,060 | 330 | 34.1 | 0.4 | 21,241 | 322 | 28.9 | 0.4 * | 3,819 * | 5.2 |

Source:  2013 Current Population Survey Annual Social and Economic Supplement.

### Table 3. Distribution of People in Total and Middle Class Population:

| | Total Population | | SPM | | Pre-Tax Cash | | Difference - SPM minus Pre-Tax | |
|---|---|---|---|---|---|---|---|---|
| | Estimate | SE | Estimate | SE | Estimate | SE | Percent | SE |
| Total Population (numbers in thousands) | 311,116 | | 111,233 | 611 | 95,765 | 672 | | |
| **Sex** | | | | | | | | |
| Male…………………………………… | 49.0 | 0.01 | 49.6 | 0.1 | 50.1 | 0.2 * | -0.5 | 0.1 |
| Female……………………………… | 51.0 | 0.01 | 50.4 | 0.1 | 49.9 | 0.2 * | 0.5 | 0.1 |
| **Age** | | | | | | | | |
| Under age 18……………………….. | 23.8 | 0.01 | 24.5 | 0.1 | 22.6 | 0.2 * | 1.9 | 0.1 |
| Aged 18 to 64………………………… | 62.2 | 0.01 | 61.9 | 0.2 | 62.6 | 0.2 * | -0.6 | 0.2 |
| Aged 65 years and older………………. | 13.9 | 0.01 | 13.6 | 0.2 | 14.8 | 0.2 * | -1.3 | 0.2 |
| **Type of Unit** | | | | | | | | |
| Married Couple | 60.1 | 0.2 | 63.6 | 0.4 | 64.7 | 0.4 * | -1.1 | 0.3 |
| Female householder | 20.2 | 0.2 | 16.9 | 0.3 | 16.7 | 0.3 | 0.2 | 0.2 |
| Male householder | 10.8 | 0.1 | 10.2 | 0.2 | 11.1 | 0.2 * | -0.9 | 0.2 |
| New SPM | 9.0 | 0.1 | 9.3 | 0.2 | 7.6 | 0.2 * | 1.7 | 0.2 |
| **Race and Hispanic Origin** | | | | | | | | |
| White | 77.9 | 0.01 | 78.7 | 0.3 | 79.4 | 0.3 * | -0.8 | 0.3 |
| Black | 12.9 | 0.01 | 12.1 | 0.2 | 12.1 | 0.2 | 0.0 | 0.2 |
| Asian | 5.3 | 0.01 | 5.3 | 0.1 | 5.0 | 0.1 * | 0.4 | 0.2 |
| Other | 3.9 | 0.01 | 3.9 | 0.1 | 3.5 | 0.1 * | 0.4 | 0.1 |
| Nonhispanic | 82.9 | 0.01 | 85.7 | 0.2 | 85.0 | 0.2 * | 0.7 | 0.2 |
| Hispanic | 17.1 | 0.01 | 14.3 | 0.2 | 15.0 | 0.2 * | -0.7 | 0.2 |
| **Nativity** | | | | | | | | |
| Native Born | 87.1 | 0.1 | 89.1 | 0.2 | 88.5 | 0.2 * | 0.6 | 0.2 |
| Naturalized Citizen | 5.9 | 0.1 | 5.7 | 0.1 | 5.8 | 0.1 | -0.1 | 0.1 |
| Foreign Born | 12.9 | 0.1 | 10.9 | 0.2 | 11.5 | 0.2 * | -0.6 | 0.2 |
| Not a Citizen | 7.0 | 0.1 | 5.2 | 0.1 | 5.8 | 0.1 * | -0.5 | 0.1 |
| **Residence** | | | | | | | | |
| Inside principal cities | 32.6 | 0.4 | 28.7 | 0.5 | 28.8 | 0.5 | -0.1 | 0.3 |
| Outside principal cities | 52.1 | 0.5 | 54.4 | 0.6 | 54.6 | 0.6 | -0.3 | 0.3 |
| Outside metropolitan statistical areas | 15.4 | 0.5 | 16.9 | 0.6 | 16.5 | 0.6 * | 0.4 | 0.2 |
| **Tenure** | | | | | | | | |
| Owner/mortgage | 44.3 | 0.3 | 50.0 | 0.4 | 48.6 | 0.4 * | 1.4 | 0.3 |
| Owner/no mortgage/rent free | 23.3 | 0.2 | 22.8 | 0.3 | 24.8 | 0.3 * | -1.9 | 0.2 |
| Renter | 32.4 | 0.3 | 27.1 | 0.4 | 26.6 | 0.4 * | 0.5 | 0.2 |
| **Health Insurance Coverage** | | | | | | | | |
| Not insured | 15.4 | 0.1 | 13.2 | 0.2 | 12.7 | 0.2 * | 0.5 | 0.2 |
| With private insurance | 63.9 | 0.2 | 71.6 | 0.3 | 74.4 | 0.3 * | -2.8 | 0.3 |
| With public, no private insurance | 20.7 | 0.2 | 15.1 | 0.2 | 12.8 | 0.3 * | 2.3 | 0.2 |
| **Work experience** | | | | | | | | |
| Worked full-time, year-round…….. | 31.7 | 0.1 | 35.0 | 0.2 | 36.1 | 0.2 * | -1.2 | 0.2 |
| Less than full-time, year-round…… | 15.1 | 0.1 | 15.2 | 0.2 | 14.7 | 0.2 * | 0.5 | 0.1 |
| Did not work at least 1 week………. | 15.4 | 0.1 | 11.8 | 0.1 | 11.7 | 0.2 | 0.1 | 0.1 |
| **Disabililty** | | | | | | | | |
| With a disability……………………… | 4.8 | 0.1 | 4.0 | 0.1 | 3.9 | 0.1 | 0.1 | 0.1 |
| With no disability…………………… | 57.1 | 0.1 | 57.5 | 0.2 | 58.2 | 0.2 * | -0.7 | 0.2 |
| **Region** | | | | | | | | |
| Northeast | 17.7 | 0.01 | 17.2 | 0.3 | 16.9 | 0.3 | 0.3 | 0.2 |
| Midwest | 21.3 | 0.01 | 22.6 | 0.2 | 22.9 | 0.3 | -0.3 | 0.2 |
| South | 37.3 | 0.01 | 37.7 | 0.3 | 38.0 | 0.3 | -0.4 | 0.3 |
| West | 23.6 | 0.01 | 22.5 | 0.3 | 22.2 | 0.3 | 0.4 | 0.3 |

Source: 2013 Current Population Survey Annual Social and Economic Supplement.

## Table 4.  Entries and Exits from Middle Class Status:  2012

| | Entries | | | | | | Exits | | | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | Enters Middle Class from Below | | | Enters Middle Class from Above | | | Exits to Below Middle Class | | | Exits to Above Middle Class | | |
| (Numbers in thousands) | Number | Percent | SE | Number | Percent | SE | Number | Percent | SE | Number | Percent | SE |
| **All People** | 18,338 | 5.9 | 0.1 | 18,831 | 6.1 | 0.1 | 12,638 | 4.1 | 0.1 | 9,062 | 2.9 | 0.1 |
| **Sex** | | | | | | | | | | | | |
| Male…………………………………………… | 8,490 | 5.6 | 0.1 | 9,610 | 6.3 | 0.1 | 6,384 | 4.2 | 0.1 | 4,535 | 3 | 0.1 |
| Female……………………………………… | 9,848 | 6.2 | 0.1 | 9,221 | 5.8 | 0.1 | 6,254 | 3.9 | 0.1 | 4,527 | 2.9 | 0.1 |
| **Age** | | | | | | | | | | | | |
| Under age 18…………………………… | 5,880 | 7.9 | 0.2 | 3,529 | 4.8 | 0.1 | 2,293 | 3.1 | 0.1 | 1,503 | 2 | 0.1 |
| Aged 18 to 64……………………………. | 9,644 | 5 | 0.1 | 13,528 | 7 | 0.1 | 8,655 | 4.5 | 0.1 | 5,548 | 2.9 | 0.1 |
| Aged 65 years and older………………………… | 2,814 | 6.5 | 0.2 | 1,775 | 4.1 | 0.2 | 1,690 | 3.9 | 0.2 | 2,011 | 4.6 | 0.2 |
| **Type of Unit** | | | | | | | | | | | | |
| Married Couple | 6,978 | 3.7 | 0.1 | 14,711 | 7.9 | 0.2 | 8,143 | 4.4 | 0.1 | 4,725 | 2.5 | 0.1 |
| Female householder | 4,335 | 6.9 | 0.2 | 1,946 | 3.1 | 0.2 | 2,365 | 3.8 | 0.2 | 1,123 | 1.8 | 0.1 |
| Male householder | 1,975 | 5.9 | 0.2 | 1,255 | 3.7 | 0.2 | 1,285 | 3.8 | 0.3 | 1,182 | 3.5 | 0.2 |
| New SPM | 5,050 | 18.1 | 0.5 | 919 | 3.3 | 0.2 | 846 | 3 | 0.2 | 2,032 | 7.3 | 0.3 |
| **Race and Hispanic Origin** | | | | | | | | | | | | |
| White | 14,427 | 6 | 0.1 | 14,322 | 5.9 | 0.1 | 9,421 | 3.9 | 0.1 | 7,877 | 3.2 | 0.1 |
| Black | 2,601 | 6.5 | 0.3 | 1,772 | 4.4 | 0.2 | 1,754 | 4.4 | 0.3 | 750 | 1.9 | 0.2 |
| Asian | 416 | 2.5 | 0.3 | 1,926 | 11.7 | 0.7 | 997 | 6.1 | 0.5 | 181 | 1.1 | 0.3 |
| Other | 895 | 7.5 | 0.5 | 811 | 6.8 | 0.6 | 466 | 3.9 | 0.4 | 255 | 2.1 | 0.3 |
| Nonhispanic | 15,370 | 6 | 0.1 | 16,359 | 6.3 | 0.1 | 9,480 | 3.7 | 0.1 | 8,288 | 3.2 | 0.1 |
| Hispanic | 2,968 | 5.6 | 0.2 | 2,472 | 4.6 | 0.2 | 3,158 | 5.9 | 0.3 | 774 | 1.5 | 0.1 |
| **Nativity** | | | | | | | | | | | | |
| Native Born | 17,064 | 6.3 | 0.1 | 15,889 | 5.9 | 0.1 | 9,953 | 3.7 | 0.1 | 8,622 | 3.2 | 0.1 |
| Naturalized Citizen | 483 | 2.7 | 0.2 | 1,819 | 10 | 0.4 | 1,298 | 7.1 | 0.4 | 216 | 1.2 | 0.1 |
| Foreign Born | 1,274 | 3.2 | 0.2 | 2,942 | 7.3 | 0.3 | 2,686 | 6.7 | 0.3 | 440 | 1.1 | 0.1 |
| Not a Citizen | 792 | 3.6 | 0.3 | 1,123 | 5.1 | 0.3 | 1,387 | 6.3 | 0.4 | 224 | 1 | 0.1 |
| **Residence** | | | | | | | | | | | | |
| Inside principal cities | 5,120 | 5.1 | 0.2 | 5,823 | 5.7 | 0.2 | 4,566 | 4.5 | 0.2 | 2,077 | 2 | 0.1 |
| Outside principal cities | 7,257 | 4.5 | 0.1 | 12,147 | 7.5 | 0.2 | 7,309 | 4.5 | 0.1 | 3,937 | 2.4 | 0.1 |
| Outside metropolitan statistical areas | 5,961 | 12.5 | 0.4 | 861 | 1.8 | 0.2 | 763 | 1.6 | 0.1 | 3,048 | 6.4 | 0.3 |
| **Tenure** | | | | | | | | | | | | |
| Owner/mortgage | 4,745 | 3.4 | 0.1 | 13,732 | 10 | 0.2 | 6,747 | 4.9 | 0.2 | 2,622 | 1.9 | 0.1 |
| Owner/no mortgage/rent free | 6,626 | 9.1 | 0.3 | 1,488 | 2.1 | 0.1 | 1,572 | 2.2 | 0.2 | 4,853 | 6.7 | 0.2 |
| Renter | 6,967 | 6.9 | 0.2 | 3,611 | 3.6 | 0.1 | 4,319 | 4.3 | 0.1 | 1,587 | 1.6 | 0.1 |
| **Health Insurance Coverage** | | | | | | | | | | | | |
| Not insured | 3,976 | 8.3 | 0.26 | 1,341 | 2.8 | 0.18 | 1,947 | 4.1 | 0 | 866 | 1.8 | 0.12 |
| With private insurance | 7,953 | 4 | 0.09 | 16,482 | 8.3 | 0.15 | 9,126 | 4.6 | 0 | 6,894 | 3.5 | 0.09 |
| With public, no private insurance | 6,409 | 10 | 0.26 | 1,008 | 1.6 | 0.1 | 1,565 | 2.4 | 0 | 1,302 | 2 | 0.11 |
| **Work experience** | | | | | | | | | | | | |
| Worked full-time, year-round……………… | 3,773 | 3.8 | 0.1 | 8,382 | 8.5 | 0.2 | 4,321 | 4.4 | 0.1 | 3,559 | 3.6 | 0.1 |
| Less than full-time, year-round…………… | 2,907 | 6.2 | 0.2 | 3,241 | 6.9 | 0.2 | 2,352 | 5 | 0.2 | 971 | 2.1 | 0.1 |
| Did not work at least 1 week………………… | 2,965 | 6.2 | 0.2 | 1,905 | 4 | 0.1 | 1,983 | 4.1 | 0.2 | 1,018 | 2.1 | 0.1 |
| **Disabililty** | | | | | | | | | | | | |
| With a disability……………………………… | 1,088 | 7.3 | 0.4 | 558 | 3.7 | 0.3 | 574 | 3.8 | 0.3 | 357 | 2.4 | 0.2 |
| With no disability…………………………… | 8,498 | 4.8 | 0.1 | 12,925 | 7.3 | 0.1 | 8,041 | 4.5 | 0.1 | 5,156 | 2.9 | 0.1 |
| **Region** | | | | | | | | | | | | |
| Northeast | 2,193 | 4 | 0.2 | 4,764 | 8.6 | 0.3 | 2,870 | 5.2 | 0.2 | 1,100 | 2 | 0.1 |
| Midwest | 4,943 | 7.4 | 0.3 | 2,755 | 4.1 | 0.2 | 1,730 | 2.6 | 0.1 | 2,779 | 4.2 | 0.2 |
| South | 7,915 | 6.8 | 0.2 | 5,403 | 4.7 | 0.2 | 3,810 | 3.3 | 0.1 | 4,035 | 3.5 | 0.1 |
| West | 3,287 | 4.5 | 0.2 | 5,909 | 8 | 0.3 | 4,229 | 5.8 | 0.2 | 1,148 | 1.6 | 0.1 |

Source:  2013 Current Population Survey Annual Social and Economic Supplement

**Table 5.  Number and Percentage of People in the Middle Class by Different Measures: 2012**

(Numbers in thousands)

| | SPM Middle Class | | | | Alternative Middle Class Definitions | | | | Difference | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Number | SE | Percent | SE | Number | SE | Percent | SE | | Number | Percent |
| Geographic Adjustments | 111,233 | 611 | 35.8 | 0.2 | 109,529 | 639 | 35.2 | 0.2 | * | 1,704 * | 0.6 |
| Noncash Benefits | 111,233 | 611 | 35.8 | 0.2 | 108,757 | 622 | 35 | 0.2 | * | 2,476 * | 0.8 |
| Taxes - All | 111,233 | 611 | 35.8 | 0.2 | 92,132 | 623 | 29.6 | 0.2 | * | 19,102 * | 6.1 |
| Work Expenses | 111,233 | 611 | 35.8 | 0.2 | 113,704 | 627 | 36.5 | 0.2 | * | -2,471 * | -0.8 |
| MOOP | 111,233 | 611 | 35.8 | 0.2 | 114,655 | 662 | 36.9 | 0.2 | * | -3,421 * | -1.1 |
| Taxes - Before Credits | 111,233 | 611 | 35.8 | 0.2 | 96,151 | 648 | 30.9 | 0.2 | * | 15,082 * | 4.9 |
| Refundable Tax Credits | 111,233 | 611 | 35.8 | 0.2 | 107,435 | 622 | 34.5 | 0.2 | * | 3,798 * | 1.2 |
| Payroll Taxes | 111,233 | 611 | 35.8 | 0.2 | 109,393 | 621 | 35.2 | 0.2 | * | 1,840 * | 0.6 |
| Taxes Before Refundable Credits and Payroll Taxes | 111,233 | 611 | 35.8 | 0.2 | 98,012 | 627 | 31.5 | 0.2 | * | 13,222 * | 4.3 |

Source:  2013 Current Population Survey Annual Social and Economic Supplement.

**Table 6 . Entries and Exits from Middle Class Status:  2012 - Impact of Individual SPM Elements**

| | Entries | | | | Exits | | | |
|---|---|---|---|---|---|---|---|---|
| | Enters Middle Class from Below | | Enters Middle Class from Above | | Exits to Below Middle Class | | Exits to Above Middle Class | |
| (Numbers in thousands) | Number | SE | Number | SE | Number | SE | Number | SE |
| Total | 18,338 | 310 | 18,831 | 346 | 12,638 | 285 | 9,062 | 206 |
| | | | | | | | | |
| Impact of Payroll Taxes | * -3,855 | 162 * | 5,588 | 192 * | 3,749 | 156.4 * | -3,856 | 161 |
| Impact of MOOP | * -8,753 | 209 * | 6,251 | 190 * | 7,126 | 213.9 * | -6,206 | 191 |
| Impact of geographic adjustments | * 2,699 | 243 * | 3,747 | 260 * | 2,394 | 210.3 * | 2,348 | 167 |
| Impact of noncash benefits | * 2,335 | 124 * | -50 | 14 * | -297 | 43.83 * | 106 | 23 |
| Impact of refundable tax credits | * 3,520 | 165 * | -27 | 13 * | -395 | 48.45 * | 91 | 23 |
| Impact of all taxes | * -2,018 | 182 * | 13,565 | 296 * | 6,529 | 205.6 * | -14,084 | 247 |
| Impact of taxes before credits | * -5,953 | 200 * | 13,597 | 296 * | 6,853 | 214 * | -14,290 | 252 |
| Impact of income taxes before credits | * -2,171 | 127 * | 11,086 | 262 * | 4,476 | 163.9 * | -8,782 | 217 |
| Impact of work expenses | * -5,444 | 185 * | 4,198 | 164 * | 4,160 | 161.7 * | -2,935 | 130 |

Source:  2013 Current Population Survey Annual Social and Economic Supplement.

## Table 7. Logistic Regression Results Modeled Likelihood of Moving Up from Below pre-Tax Cash Middle Class into the SPM Middle Class

| Effect | Odds Ratio | 95% Wald Confidence Limits | |
|---|---|---|---|
| **Under 18 years of age** | **1.418** | **1.323** | **1.521** |
| **65 years and older** | **1.182** | **1.069** | **1.308** |
| Midwest | 1.111 | 0.949 | 1.301 |
| South | 1.144 | 0.988 | 1.325 |
| West | 1.086 | 0.936 | 1.26 |
| **Owner without a mortgage** | **2.203** | **1.99** | **2.44** |
| **Renter** | **1.286** | **1.169** | **1.415** |
| **Female householder unit** | **1.605** | **1.436** | **1.794** |
| **Male householder unit** | **1.456** | **1.301** | **1.631** |
| **In new SPM resource unit** | **4.572** | **4.093** | **5.107** |
| **Black** | **0.866** | **0.765** | **0.98** |
| **Other race** | **0.849** | **0.725** | **0.994** |
| **Hispanic** | **0.84** | **0.746** | **0.947** |
| **Not a citizen** | **0.72** | **0.613** | **0.846** |
| Inside MSA, outside principal city | 0.985 | 0.9 | 1.078 |
| **Outside MSA** | **1.571** | **1.416** | **1.743** |
| **Private health insurance** | **0.687** | **0.623** | **0.759** |
| Public health insurance only | 1.088 | 0.991 | 1.194 |
| Worked less than full time year round | 1.085 | 0.993 | 1.186 |
| **Did not work last year** | **1.155** | **1.057** | **1.261** |
| Disabled | 0.997 | 0.889 | 1.119 |
| **Received noncash benefits** | **0.803** | **0.715** | **0.902** |
| Had MOOP expenses | 1.124 | 0.906 | 1.395 |
| **Paid income taxes (before credits)** | **1.496** | **1.346** | **1.662** |
| **Paid payroll taxes** | **0.421** | **0.374** | **0.473** |
| **Received refundable tax credit** | **4.673** | **4.212** | **5.185** |
| Paid for childcare | 0.867 | 0.744 | 1.011 |
| **Lived in high cost area** | **0.376** | **0.336** | **0.42** |

Items in **bold** statistically signficant at the 5% confidence level.

Source:  2013 Current Population Survey Annual Social and Economic Supplement.

## Table 8. Logistic Regression Results Modeled Likelihood of Moving Down from Above the pre-Tax Cash Middle Class into the SPM Middle Class

| Effect | Odds Ratio | 95% Wald Confidence Limits | |
|---|---|---|---|
| **Under 18 years of age** | **0.673** | **0.634** | **0.714** |
| **65 years and older** | **1.448** | **1.283** | **1.634** |
| **Midwest** | **0.748** | **0.649** | **0.863** |
| **South** | **0.716** | **0.637** | **0.806** |
| West | 0.96 | 0.861 | 1.071 |
| **Owner without a mortgage** | **0.276** | **0.237** | **0.321** |
| **Renter** | **0.638** | **0.577** | **0.705** |
| **Female householder unit** | **0.606** | **0.524** | **0.7** |
| **Male householder unit** | **0.726** | **0.636** | **0.828** |
| **In new SPM resource unit** | **0.578** | **0.495** | **0.674** |
| Black | 1.11 | 0.964 | 1.279 |
| **Other race** | **1.461** | **1.303** | **1.637** |
| Hispanic | 1.04 | 0.916 | 1.182 |
| **Not a citizen** | **0.851** | **0.74** | **0.979** |
| Inside MSA, outside principal city | 1.07 | 0.974 | 1.176 |
| **Outside MSA** | **0.626** | **0.507** | **0.772** |
| **Private health insurance** | **1.551** | **1.355** | **1.775** |
| Public health insurance only | 0.99 | 0.822 | 1.191 |
| **Worked less than full time year round** | **1.117** | **1.041** | **1.199** |
| Did not work last year | 0.941 | 0.868 | 1.019 |
| Disabled | 1.124 | 0.962 | 1.312 |
| **Received noncash benefits** | **0.217** | **0.141** | **0.335** |
| **Had MOOP expenses** | **2.37** | **1.59** | **3.533** |
| **Paid income taxes (before credits)** | **75.306** | **26.688** | **212.492** |
| **Paid payroll taxes** | **1.729** | **1.409** | **2.122** |
| **Received refundable tax credit** | **0.426** | **0.354** | **0.513** |
| **Paid for childcare** | **1.426** | **1.28** | **1.588** |
| **Lived in high cost area** | **2.854** | **2.571** | **3.169** |

Items in **bold** statistically signficant at the 5% confidence level.

Source: 2013 Current Population Survey Annual Social and Economic Supplement.

**Table 9. Logistic Regression Results Modeled Likelihood of Moving Down from the pre-tax Cash Middle Class to below the SPM Middle Class**

| Effect | Odds Ratio | 95% Wald Confidence Limits | |
|---|---|---|---|
| **Under 18 years of age** | **0.834** | **0.779** | **0.893** |
| **65 years and older** | **2.026** | **1.812** | **2.266** |
| **Midwest** | **0.732** | **0.629** | **0.852** |
| **South** | **0.765** | **0.667** | **0.877** |
| West | 1.061 | 0.932 | 1.208 |
| **Owner without a mortgage** | **0.507** | **0.433** | **0.594** |
| Renter | 1.056 | 0.935 | 1.191 |
| Female householder unit | 0.891 | 0.761 | 1.045 |
| Male householder unit | 1.079 | 0.956 | 1.218 |
| **In new SPM resource unit** | **0.665** | **0.569** | **0.776** |
| **Black** | **1.378** | **1.188** | **1.597** |
| Other race | 1.145 | 0.984 | 1.331 |
| **Hispanic** | **1.722** | **1.539** | **1.926** |
| Not a citizen | 1.143 | 0.989 | 1.323 |
| Inside MSA, outside principal city | 1.036 | 0.942 | 1.14 |
| **Outside MSA** | **0.728** | **0.596** | **0.89** |
| Private health insurance | 1.038 | 0.92 | 1.17 |
| **Public health insurance only** | **0.821** | **0.708** | **0.953** |
| **Worked less than full time year round** | **1.329** | **1.219** | **1.447** |
| **Did not work last year** | **1.453** | **1.332** | **1.585** |
| **Disabled** | **1.297** | **1.122** | **1.5** |
| **Received noncash benefits** | **0.736** | **0.602** | **0.901** |
| **Had MOOP expenses** | **2.787** | **1.832** | **4.241** |
| **Paid income taxes (before credits)** | **3.875** | **3.254** | **4.614** |
| Paid payroll taxes | 1.087 | 0.9 | 1.313 |
| Received refundable tax credit | 0.978 | 0.838 | 1.142 |
| **Paid for childcare** | **1.274** | **1.095** | **1.481** |
| **Lived in high cost area** | **2.062** | **1.841** | **2.309** |

Items in **bold** statistically signficant at the 5% confidence level.
Source: 2013 Current Population Survey Annual Social and Economic Supplement.

**Table 10. Logistic Regression Results Modeled Likelihood of Moving Up from the pre-tax Cash Middle Class to above the SPM Middle Class**

| Effect | Odds Ratio | 95% Wald Confidence Limits | |
|---|---|---|---|
| Under 18 years of age | 1.084 | 0.977 | 1.203 |
| **65 years and older** | **0.753** | **0.651** | **0.871** |
| **Midwest** | **1.286** | **1.1** | **1.503** |
| **South** | **1.379** | **1.176** | **1.617** |
| West | 0.944 | 0.784 | 1.135 |
| **Owner without a mortgage** | **3.809** | **3.385** | **4.285** |
| **Renter** | **1.247** | **1.072** | **1.45** |
| **Female householder unit** | **1.708** | **1.499** | **1.946** |
| Male householder unit | 1.069 | 0.92 | 1.242 |
| **In new SPM resource unit** | **6.227** | **5.487** | **7.068** |
| Black | 0.892 | 0.73 | 1.09 |
| Other race | 0.812 | 0.62 | 1.064 |
| Hispanic | 0.982 | 0.8 | 1.206 |
| Not a citizen | 0.884 | 0.675 | 1.157 |
| Inside MSA, outside principal city | 1 | 0.887 | 1.127 |
| **Outside MSA** | **1.683** | **1.465** | **1.932** |
| **Private health insurance** | **1.52** | **1.295** | **1.784** |
| **Public health insurance only** | **1.414** | **1.175** | **1.7** |
| **Worked less than full time year round** | **0.76** | **0.689** | **0.838** |
| **Did not work last year** | **0.68** | **0.601** | **0.769** |
| Disabled | 0.923 | 0.75 | 1.136 |
| **Received noncash benefits** | **0.208** | **0.138** | **0.313** |
| Had MOOP expenses | 0.88 | 0.668 | 1.161 |
| **Paid income taxes (before credits)** | **5.789** | **4.711** | **7.114** |
| **Paid payroll taxes** | **0.393** | **0.331** | **0.466** |
| **Received refundable tax credit** | **0.21** | **0.158** | **0.281** |
| Paid for childcare | 0.804 | 0.634 | 1.019 |
| **Lived in high cost area** | **0.348** | **0.303** | **0.4** |

Items in **bold** statistically signficant at the 5% confidence level.
Source: 2013 Current Population Survey Annual Social and Economic Supplement.

**Appendix Table A. Size of the Middle Class Using Different Middle Class Definitions: 2012**

| Definition | Using SPM Concepts | | | | Using pre-Tax Cash Income | | | | | Difference | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Numer | SE | Percent | SE | Number | SE | Percent | SE | | Number | SE | Percent | SE |
| 75% to 150% of Median | 111,233 | 611 | 35.8 | 0.2 | 95,765 | 672 | 30.8 | 0.2 | * | 15,468 | 590 * | 5.0 | 0.2 |
| 25th Percentile and 75th Percentile | 166,508 | 706 | 53.5 | 0.2 | 154,461 | 720 | 49.6 | 0.2 | * | 12,046 | 609 * | 3.9 | 0.2 |
| 50% to 150% of Median | 163,691 | 712 | 52.6 | 0.2 | 137,392 | 725 | 44.2 | 0.2 | * | 26,299 | 629 * | 8.5 | 0.2 |
| 75% to 125% of Median | 77,700 | 559 | 25.0 | 0.2 | 66,161 | 550 | 21.3 | 0.2 | * | 11,539 | 544 * | 3.7 | 0.2 |
| Over 300% of Poverty Threshold | 97,577 | 695 | 31.4 | 0.2 | 152,198 | 740 | 48.9 | 0.2 | * | (54,621) | 568 * | -17.6 | 0.2 |
| 67% to 200% of the Median | 168,177 | 722 | 54.1 | 0.2 | 148,449 | 710 | 47.7 | 0.2 | * | 19,728 | 610 * | 6.3 | 0.2 |
| 100% to 250% of Poverty Threshold | 133,435 | 750 | 42.9 | 0.2 | 86,882 | 574 | 27.9 | 0.2 | * | 46,553 | 687 * | 15.0 | 0.2 |
| 100% to 200% of Poverty Threshold | 97,174 | 723 | 31.2 | 0.2 | 59,880 | 572 | 19.2 | 0.2 | * | 37,294 | 726 * | 12.0 | 0.2 |

Source: 2013 Current Population Survey Annual Social and Economic Supplement.

**Appendix Table B - Entries and Exits from Middle Class Status: 2012 - Impact of Individual SPM Elements by Age Category**
**EXITS**

| | Total Population | | Age < 18 | | Age 18 - 64 | | Age 65+ | |
|---|---|---|---|---|---|---|---|---|
| **Out of Pre-Tax Cash Middle Class to Below SPM** | Number | Percent | Number | Percent | Number | Percent | Number | Percent |
| Total | 12,638 | 4.1 | 2,293 | 3.1 | 8,655 | 4.5 | 1,690 | 3.9 |
| Impact of Payroll Taxes | * 3,749 * | 1.2 * | 895 * | 1.2 * | 2,696 * | 1.4 * | 158 * | 0.4 |
| Impact of MOOP | * 7,126 * | 2.3 * | 1,354 * | 1.8 * | 4,462 * | 2.3 * | 1310 * | 3.0 |
| Impact of geographic adjustments | * 2,394 * | 0.8 * | 595 * | 0.8 * | 1,640 * | 0.9 * | 159 * | 0.4 |
| Impact of noncash benefits | * (297) * | -0.1 * | (84) * | -0.1 * | (181) * | -0.1 * | -32 * | -0.1 |
| Impact of refundable tax credits | * (395) * | -0.1 * | (121) * | -0.2 * | (243) * | -0.1 * | -31 * | -0.1 |
| Impact of all taxes | * 6,529 * | 2.1 * | 1,349 * | 1.8 * | 4,756 * | 2.5 * | 424 * | 1.0 |
| Impact of taxes before credits | * 6,853 * | 2.2 * | 1,440 * | 1.9 * | 4,968 * | 2.6 * | 444 * | 1.0 |
| Impact of income taxes before credits | * 4,476 * | 1.4 * | 852 * | 1.2 * | 3,341 * | 1.7 * | 283 * | 0.7 |
| Impact of work expenses | * 4,160 * | 1.3 * | 1,023 * | 1.4 * | 2,950 * | 1.5 * | 187 * | 0.4 |
| **Out of Pre-Tax Cash Middle Class to Above SPM** | | | | | | | | |
| Total | 9,062 | 2.9 | 1,503 | 2.0 | 5,548 | 2.9 | 2,011 | 4.6 |
| Impact of Payroll Taxes | * (3,856) * | -1.2 * | (961) * | -1.3 * | (2,688) * | -1.4 * | (207) * | -0.5 |
| Impact of MOOP | * (6,206) * | -2.0 * | (965) * | -1.3 * | (3,142) * | -1.6 * | (2,099) * | -4.9 |
| Impact of geographic adjustments | * 2,348 * | 0.8 * | 661 * | 0.9 * | 1,350 * | 0.7 * | 337 * | 0.8 |
| Impact of noncash benefits | * 106 * | 0.0 * | 47 * | 0.1 * | 51 * | 0.0 * | 8 * | 0.0 |
| Impact of refundable tax credits | * 91 * | 0.0 * | 35 * | 0.1 * | 50 * | 0.0 * | 5 * | 0.0 |
| Impact of all taxes | * (14,084) * | -4.5 * | (3,339) * | -4.5 * | (9,888) * | -5.1 * | (857) * | -2.0 |
| Impact of taxes before credits | * (14,290) * | -4.6 * | (3,412) * | -4.6 * | (10,007) * | -5.2 * | (871) * | -2.0 |
| Impact of income taxes before credits | * (8,782) * | -2.8 * | (1,922) * | -2.6 * | (6,193) * | -3.2 * | (668) * | -1.5 |
| Impact of work expenses | * (2,935) * | -0.9 * | (659) * | -0.9 * | (2,047) * | -1.1 * | (228) * | -0.5 |
| **ENTRIES** | | | | | | | | |
| **Moved from below into the SPM Middle Class** | | | | | | | | |
| Total | 18,338 | 5.9 | 5,880 | 7.9 | 9,644 | 5.0 | 2,814 | 6.5 |
| Impact of Payroll Taxes | * -3,855 * | -1.2 * | -1,525 * | -2.1 * | -2,258 * | -1.2 * | -72 * | -0.2 |
| Impact of MOOP | * -8,753 * | -2.8 * | -2,067 * | -2.8 * | -3,603 * | -1.9 * | -3,084 * | -7.1 |
| Impact of geographic adjustments | * 2,699 * | 0.9 * | 958 * | 1.3 * | 1,351 * | 0.7 * | 390 * | 0.9 |
| Impact of noncash benefits | * 2,335 * | 0.8 * | 1,107 * | 1.5 * | 1,123 * | 0.6 * | 105 * | 0.2 |
| Impact of refundable tax credits | * 3,520 * | 1.1 * | 1,858 * | 2.5 * | 1,603 * | 0.8 * | 59 * | 0.1 |
| Impact of all taxes | * -2,018 * | -0.7 * | 75 * | 0.1 * | -2,012 * | -1.0 * | -81 * | -0.2 |
| Impact of taxes before credits | * -5,953 * | -1.9 * | -1,991 * | -2.7 * | -3,825 * | -2.0 * | -136 * | -0.3 |
| Impact of income taxes before credits | * -2,171 * | -0.7 * | -534 * | -0.7 * | -1,580 * | -0.8 * | -57 * | -0.1 |
| Impact of work expenses | * -5,444 * | -1.8 * | -2,059 * | -2.8 * | -3,243 * | -1.7 * | -142 * | -0.3 |
| **Moved from above into SPM Middle Class** | | | | | | | | |
| Total | 18,831 | 6.1 | 3,529 | 4.8 | 13,528 | 7.0 | 1,775 | 4.1 |
| Impact of Payroll Taxes | * 5,588 * | 1.8 * | 1,233 * | 1.7 * | 4,061 * | 2.1 * | 294 * | 0.7 |
| Impact of MOOP | * 6,251 * | 2.0 * | 1,184 * | 1.6 * | 4,195 * | 2.2 * | 872 * | 2.0 |
| Impact of geographic adjustments | * 3,747 * | 1.2 * | 880 * | 1.2 * | 2,526 * | 1.3 * | 341 * | 0.8 |
| Impact of noncash benefits | * -50 * | 0.0 * | -17 * | 0.0 * | -33 * | 0.0 * | 0 | 0.0 |
| Impact of refundable tax credits | * -27 * | 0.0 * | -5 | 0.0 * | -22 * | 0.0 * | 0 | 0.0 |
| Impact of all taxes | * 13,565 * | 4.4 * | 2,819 * | 3.8 * | 9,668 * | 5.0 * | 1,078 * | 2.5 |
| Impact of taxes before credits | * 13,597 * | 4.4 * | 2,827 * | 3.8 * | 9,693 * | 5.0 * | 1,078 * | 2.5 |
| Impact of income taxes before credits | * 11,086 * | 3.6 * | 2,325 * | 3.1 * | 7,832 * | 4.0 * | 930 * | 2.2 |
| Impact of work expenses | * 4,198 * | 1.4 * | 1,026 * | 1.4 * | 2,952 * | 1.5 * | 220 * | 0.5 |
| **Middle Class Both Measures** | | | | | | | | |
| Total | 74,064 | 23.8 | 17,829 | 24.0 | 45,715 | 23.6 | 10,520 | 24.3 |
| Impact of Payroll Taxes | * 107 * | 0.0 * | 67 * | 0.1 * | (8) * | 0.0 * | 48 * | 0.1 |
| Impact of MOOP | * (919) * | -0.3 * | (388) * | -0.5 * | (1,320) * | -0.7 * | 789 * | 1.8 |
| Impact of geographic adjustments | * (4,742) * | -1.5 * | (1,256) * | -1.7 * | (2,990) * | -1.5 * | (496) * | -1.2 |
| Impact of noncash benefits | * 191 * | 0.1 * | 37 * | 0.1 * | 131 * | 0.1 * | 23 * | 0.1 |
| Impact of refundable tax credits | * 305 * | 0.1 * | 86 * | 0.1 * | 194 * | 0.1 * | 25 * | 0.1 |
| Impact of all taxes | * 7,555 * | 2.4 * | 1,990 * | 2.7 * | 5,131 * | 2.7 * | 433 * | 1.0 |
| Impact of taxes before credits | * 7,438 * | 2.4 * | 1,972 * | 2.7 * | 5,039 * | 2.6 * | 427 * | 1.0 |
| Impact of income taxes before credits | * 4,306 * | 1.4 * | 1,070 * | 1.4 * | 2,852 * | 1.5 * | 384 * | 0.9 |
| Impact of work expenses | * (1,225) * | -0.4 * | (364) * | -0.5 * | (903) * | -0.5 * | 41 * | 0.1 |

Source: 2013 Current Population Survey Annual Social and Economic Supplement.

**Appendix Table C:  Entries and Exits from Middle Class Status:  2012 - Impact of Individual SPM Elements by Family Type**

| | Married Couple | | Male Householder | | Female Householder | | | New SPM Unit | |
|---|---|---|---|---|---|---|---|---|---|
| | **Number** | **Percent** | Number | Percent | Number | SE | Percent | Percent | Number |
| **EXITS** | | | | | | | | | |
| **Out of Pre-Tax Cash Middle Class to Below** | | | | | | | | | |
| Total | 8,143 | 4.4 | 1,285 | 3.8 | 2,365 | | 3.8 | 846 | 3.0 |
| Impact of Payroll Taxes | * 2,496 * | 1.3 | * 338 * | 1.0 | * 704 * | | 1.1 | * 212 * | 0.8 |
| Impact of MOOP | * 4,941 * | 2.6 | * 600 * | 1.8 | * 1295 * | | 2.1 | * 290 * | 1.0 |
| Impact of geographic adjustments | * 1,465 * | 0.8 | * 272 * | 0.8 | * 595 * | | 1.0 | * 61 | 0.2 |
| Impact of noncash benefits | * (113) * | -0.1 | * (26) * | -0.1 | * -91 * | | -0.1 | * -67 * | -0.2 |
| Impact of refundable tax credits | * (125) * | -0.1 | * (20) * | -0.1 | * -144 * | | -0.2 | * -106 * | -0.4 |
| Impact of all taxes | * 4,185 * | 2.2 | * 729 * | 2.2 | * 1258 * | | 2.0 | * 357 * | 1.3 |
| Impact of taxes before credits | * 4,315 * | 2.3 | * 757 * | 2.3 | * 1363 * | | 2.2 | * 418 * | 1.5 |
| Impact of income taxes before credits | * 2,661 * | 1.4 | * 570 * | 1.7 | * 963 * | | 1.5 | * 282 * | 1.0 |
| Impact of work expenses | * 2,808 * | 1.5 | * 340 * | 1.0 | * 772 * | | 1.2 | * 240 * | 0.9 |
| | 9062 | | | | | | | | |
| **Out of Pre-Tax Cash Middle Class to Above** | | | | | | | | | |
| Total | 4,725 | 2.5 | 1,182 | 3.5 | 1,123 | | 1.8 | 2,032 | 7.3 |
| Impact of Payroll Taxes | * (2,493) * | -1.3 | * (448) * | -1.3 | * (514) * | | -0.8 | * (401) * | -1.4 |
| Impact of MOOP | * (4,283) * | -2.3 | * (480) * | -1.4 | * (1,012) * | | -1.6 | * (432) * | -1.6 |
| Impact of geographic adjustments | * 2,049 * | 1.1 | * 221 * | 0.7 | * 125 * | | 0.2 | * (46) | -0.2 |
| Impact of noncash benefits | * 76 * | 0.0 | * 8 | 0.0 | * 8 | | 0.0 | * 14 | 0.1 |
| Impact of refundable tax credits | * 55 * | 0.0 | * 6 | 0.0 | * 15 | | 0.0 | * 14 | 0.1 |
| Impact of all taxes | * (8,846) * | -4.7 | * (1,916) * | -5.7 | * (2,085) * | | -3.3 | * (1,237) * | -4.4 |
| Impact of taxes before credits | * (8,943) * | -4.8 | * (1,929) * | -5.8 | * (2,154) * | | -3.4 | * (1,265) * | -4.5 |
| Impact of income taxes before credits | * (5,202) * | -2.8 | * (1,298) * | -3.9 | * (1,393) * | | -2.2 | * (889) * | -3.2 |
| Impact of work expenses | * (1,882) * | -1.0 | * (290) * | -0.9 | * (409) * | | -0.7 | * (354) * | -1.3 |
| **ENTRIES** | | | | | | | | | |
| **Moved from below into the SPM Middle Class** | | | | | | | | | |
| Total | 6978 | 3.7 | 1975 | 5.9 | 4335 | | 6.9 | 5050 | 18.1 |
| Impact of Payroll Taxes | * -2,220 * | -1.2 | * -371 * | -1.1 | * -715 * | | -1.1 | * -550 * | -2.0 |
| Impact of MOOP | * -4,866 * | -2.6 | * -908 * | -2.7 | * -2,283 * | | -3.6 | * -696 * | -2.5 |
| Impact of geographic adjustments | * 1,602 * | 0.9 | * 259 * | 0.8 | * 673 * | | 1.1 | * 164 * | 0.6 |
| Impact of noncash benefits | * 923 * | 0.5 | * 207 * | 0.6 | * 887 * | | 1.4 | * 319 * | 1.1 |
| Impact of refundable tax credits | * 1,560 * | 0.8 | * 180 * | 0.5 | * 1,231 * | | 2.0 | * 550 * | 2.0 |
| Impact of all taxes | * -1,162 * | -0.6 | * -679 * | -2.0 | * -164 * | | -0.3 | * -13 | -0.1 |
| Impact of taxes before credits | * -3,134 * | -1.7 | * -888 * | -2.7 | * -1,326 * | | -2.1 | * -604 * | -2.2 |
| Impact of income taxes before credits | * -925 * | -0.5 | * -471 * | -1.4 | * -504 * | | -0.8 | * -271 * | -1.0 |
| Impact of work expenses | * -2,652 * | -1.4 | * -535 * | -1.6 | * -1,392 * | | -2.2 | * -864 * | -3.1 |
| **Moved from above into SPM Middle Class** | | | | | | | | | |
| Total | 14711 | 7.9 | 1255 | 3.7 | 1946 | | 3.1 | 919 | 3.3 |
| Impact of Payroll Taxes | * 4,300 * | 2.3 | * 454 * | 1.4 | * 589 * | | 0.9 | * 246 * | 0.9 |
| Impact of MOOP | * 4,987 * | 2.7 | * 434 * | 1.3 | * 619 * | | 1.0 | * 211 * | 0.8 |
| Impact of geographic adjustments | * 2,465 * | 1.3 | * 466 * | 1.4 | * 620 * | | 1.0 | * 196 * | 0.7 |
| Impact of noncash benefits | * -38 * | 0.0 | * 0 | 0.0 | * -6 | | 0.0 | * -7 | 0.0 |
| Impact of refundable tax credits | * -17 | 0.0 | * 0 | 0.0 | * -2 | | 0.0 | * -9 * | 0.0 |
| Impact of all taxes | * 10,656 * | 5.7 | * 925 * | 2.8 | * 1,435 * | | 2.3 | * 549 * | 2.0 |
| Impact of taxes before credits | * 10,668 * | 5.7 | * 925 * | 2.8 | * 1,439 * | | 2.3 | * 565 * | 2.0 |
| Impact of income taxes before credits | * 8,625 * | 4.6 | * 805 * | 2.4 | * 1,223 * | | 2.0 | * 432 * | 1.6 |
| Impact of work expenses | * 3,411 * | 1.8 | * 268 * | 0.8 | * 374 * | | 0.6 | * 145 * | 0.5 |
| | 74,064 | | | | | | | | |
| **Middle Class Both Measures** | | | | | | | | | |
| Total | 49,051 | 26.2 | 8117 | 24.2 | 12480 | | 19.9 | 4416 | 15.8 |
| Impact of Payroll Taxes | * (3) | 0.0 | * 110 * | 0.3 | * (189) * | | -0.3 | * 189 * | 0.7 |
| Impact of MOOP | * (658) * | -0.4 | * (120) * | -0.4 | * (283) * | | -0.5 | * 142 * | 0.5 |
| Impact of geographic adjustments | * (3,514) * | -1.9 | * (493) * | -1.5 | * (720) * | | -1.2 | * (15) | -0.1 |
| Impact of noncash benefits | * 37 | 0.0 | * 18 | 0.1 | * 83 * | | 0.1 | * 53 * | 0.2 |
| Impact of refundable tax credits | * 70 * | 0.0 | * 14 | 0.0 | * 129 * | | 0.2 | * 92 * | 0.3 |
| Impact of all taxes | * 4,661 * | 2.5 | * 1,187 * | 3.5 | * 827 * | | 1.3 | * 880 * | 3.2 |
| Impact of taxes before credits | * 4,628 * | 2.5 | * 1,172 * | 3.5 | * 791 * | | 1.3 | * 847 * | 3.0 |
| Impact of income taxes before credits | * 2,542 * | 1.4 | * 728 * | 2.2 | * 430 * | | 0.7 | * 607 * | 2.2 |
| Impact of work expenses | * (925) * | -0.5 | * (50) | -0.2 | * (364) * | | -0.6 | * 114 * | 0.4 |

Source:  2013 Current Population Survey Annual Social and Economic Supplement.

## Appendix Table D. Logistic Regression Results Modeled Likelihood of being in the SPM Middle Class

| Effect | Odds Ratio | 95% Wald Confidence Limits | |
|---|---|---|---|
| **Under 18 years of age** | **1.265** | **1.228** | **1.304** |
| **65 years and older** | **1.3** | **1.227** | **1.377** |
| Midwest | 0.999 | 0.936 | 1.067 |
| South | 1.048 | 0.985 | 1.114 |
| West | 1.041 | 0.977 | 1.108 |
| **Owner without a mortgage** | **0.937** | **0.891** | **0.986** |
| Renter | 1.007 | 0.961 | 1.055 |
| Female householder unit | 1.024 | 0.968 | 1.084 |
| **Male householder unit** | **1.064** | **1.011** | **1.12** |
| **In new SPM resource unit** | **1.171** | **1.091** | **1.257** |
| **Black** | **1.205** | **1.13** | **1.285** |
| **Other race** | **1.146** | **1.062** | **1.236** |
| **Hispanic** | **1.062** | **1.004** | **1.123** |
| **Not a citizen** | **0.816** | **0.767** | **0.867** |
| **Inside MSA, outside principal city** | **1.17** | **1.122** | **1.22** |
| **Outside MSA** | **1.356** | **1.277** | **1.44** |
| Private health insurance | 0.984 | 0.934 | 1.036 |
| Public health insurance only | 1.05 | 0.991 | 1.113 |
| **Worked less than full time year round** | **1.088** | **1.049** | **1.129** |
| **Did not work last year** | **0.951** | **0.912** | **0.991** |
| **Disabled** | **1.111** | **1.043** | **1.183** |
| **Received noncash benefits** | **0.484** | **0.451** | **0.519** |
| **Had MOOP expenses** | **1.452** | **1.311** | **1.608** |
| **Paid income taxes (before credits)** | **3.157** | **2.928** | **3.403** |
| Paid payroll taxes | 1.063 | 0.988 | 1.144 |
| **Received refundable tax credit** | **0.718** | **0.676** | **0.763** |
| **Paid for childcare** | **1.169** | **1.098** | **1.244** |
| **Lived in high cost area** | **0.846** | **0.803** | **0.891** |

Items in **bold** statistically signficant at the 5% confidence level.

Source: 2013 Current Population Survey Annual Social and Economic Supplement.